

CLASS 433, DENTISTRY**SECTION I - CLASS DEFINITION**

This class is a specific class under the broader class of Surgery and includes methods directed to or including specific dental steps, e.g., taking impressions of the teeth or gums, adapting a plate or model to a particular mouth formation, mounting teeth on a plate in a particular way, etc.; apparatus, implements, and devices relating to the treatment of teeth or gums, or the replacement of teeth.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS**APPARATUS**

Inasmuch as this class is defined in terms of specific rather than proximate function, many of the apparatus provided for in this class are also provided for broadly in the proximate function classes. Unless otherwise stated, patents claiming such apparatus should be classified as follows: patents with claims reciting structure peculiar to dentistry should be placed as originals in Class 433. Use of the functional adjective "dental" will not in itself cause placement in Class 433. For example, "a dental mirror comprising...", without further peculiar dental structure recited is classified broadly with mirrors in Class 359, Optics: Systems (Including Communication) and Elements (subclass 882 for a mirror with a handle). However, the recitation of means to prevent fogging or accumulation of water from a drill dictates classification in Class 433. Use of nouns peculiar to dentistry such as "a dental handpiece..." or "an articulator comprising...", will cause classification in Class 433. Apparatus and implements classified in Class 433 are generally those of the type used by a dentist. However, Class 433 will take a device which is disclosed as being used by individuals upon their own teeth, if not provided for elsewhere.

METHODS

Methods including steps normally performed by a dentist are classified in Class 433. Methods for making prostheses and appliances and which contain only those steps which are performed by a technician (e.g., molding, die shaping, etc.) are classified in the appropriate manufacturing class. Methods of treating a tooth by application of a named composition are classified in Class 433 if more than the mere application to a tooth is

claimed (e.g., an additional step of drilling, cleaning, filling, etc.).

PROSTHESES OR APPLIANCES

Class 433 will take claims to a dental prosthesis or appliance, per se, unless claimed in terms of a particular composition or material and no structural limitations are recited. Patents including a claim to a composition, per se, are classified in the appropriate composition class.

SECTION III - REFERENCES TO OTHER CLASSES**SEE OR SEARCH CLASS:**

- 29, Metal Working, subclasses 592+ for miscellaneous processes for making dental parts; subclasses 426.1 for methods of disassembly; and subclasses 426.1+ for methods of assembly.
- 72, Metal Deforming, subclasses 60+ and 343+ for forming metal dentures or portions thereof by die shaping.
- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, appropriate subclasses for alloys for making and filling teeth, and other dental prostheses.
- 106, Compositions: Coating or Plastic, subclass 35 for coatings or plastic compositions specialized for dental use.
- 134, Cleaning and Liquid Contact With Solids, appropriate subclasses for methods and apparatus for cleaning dentures.
- 164, Metal Founding, appropriate subclasses for apparatus and methods for casting dental parts of metal. See particularly subclass 376 for investment type molds.
- 206, Special Receptacle or Package, subclass 63.5 for a special container, package, or carrying case for a dental implement, material, or article.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 16+ for processes of molding dental parts of material other than metal, where a specific dental step is not recited.
- 378, X-Ray or Gamma Ray Systems or Devices, appropriate subclasses for X-ray sources, detectors, and related apparatus, or methods of using such apparatus in dentistry for producing images of teeth.

- 420, Alloys or Metallic Compositions, subclasses 526+ for amalgams, per se, which may be useful for dental purposes.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses for processes for sterilizing or disinfecting dental apparatus, and for apparatus for chemically disinfecting or sterilizing dental implements.
- 427, Coating Processes, subclasses 2.1+ for processes for making dental products comprising a coating step (e.g., dental implements, dental prostheses, etc.).
- 451, Abrading, subclasses 28+ for a process for abrading a dental prosthesis.
- 520, Synthetic Resins or Natural Rubbers, appropriate subclasses, particularly Class 523, subclasses 105+ for nonmedicated compositions containing a synthetic resin having utility specifically intended to be for contact with animal living tissue, especially subclasses 109 and 113- 120 for dental compositions or to processes of preparing said compositions.

SUBCLASSES

- 1 VETERINARY DENTISTRY:**
This subclass is indented under the class definition. Subject matter peculiar to the treatment or replacement of the teeth of animals.
- 2 ORTHODONTICS:**
This subclass is indented under the class definition. Subject matter relating to the correction of malocclusions, or the maintenance of desired position or alignment of natural teeth.
- 3 Tool:**
This subclass is indented under subclass 2. Apparatus to be used for manipulating or otherwise working with an orthodontic appliance.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
25+, for other dental tools.
141+, for hand manipulatable tools.
- SEE OR SEARCH CLASS:
29, Metal Working, subclasses 700+ for assembly and disassembly tools.
81, Tools, appropriate subclasses for hand tools of both general purpose and spe-

cific application which are not provided for elsewhere.

- 140, Wireworking, appropriate subclasses for wireworking tools.

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Plier type:

This subclass is indented under subclass 3. Apparatus comprising a hand manipulatable implement which includes two elongated members pivotally connected intermediate their lengths, each having cooperating work engaging jaw on one side of the pivot and a handle portion on the opposite side of the pivot.

SEE OR SEARCH CLASS:

- 29, Metal Working, subclasses 225+ and 268 for disassembly and assembly pliers.
81, Tools, subclasses 300+ for pliers in general.

5

Including extra-oral force transmitting means:

This subclass is indented under subclass 2. Subject matter wherein a tooth is aligned or positioned by a device which includes a member that is worn externally of the mouth and places the device under tension.

6

By mouthpiece-type retainer:

This subclass is indented under subclass 2. Subject matter wherein a member which conforms in shape to a patient's teeth is worn over the teeth to complete an orthodontic treatment or to correct mild malocclusions.

7

By device having means to apply outwardly directed force (e.g., expander):

This subclass is indented under subclass 2. Subject matter wherein a tooth is positioned or aligned by a device which includes two force applying surfaces movable in divergent paths.

8

Bracket:

This subclass is indented under subclass 2. Subject matter relating to an orthodontic element adapted to be fixed to a tooth and having means for rigidly connecting or positioning an arch wire or similar force transmitting strand thereto.

9 Cemented to tooth:

This subclass is indented under subclass 8. Subject matter wherein the appliance is secured to a tooth by a settable binding substance.

SEE OR SEARCH THIS CLASS, SUBCLASS:

226+, for methods of treating or restoring natural teeth by filling or cementing.

10 Having means to secure arch wire:

This subclass is indented under subclass 8. Subject matter wherein the orthodontic element includes means for rigidly connecting an arch wire or similar force transmitting strand thereto.

11 Resiliently biased clamping member:

This subclass is indented under subclass 10. Subject matter wherein the means for rigidly connecting arch wire to the bracket includes an elastically yieldable retaining means.

12 Tension adjustment nut:

This subclass is indented under subclass 10. Subject matter wherein a threaded member is provided and adapted to cooperate with threads formed on either the bracket or an arch wire engaged therewith whereby rotation of the threaded member causes a change in the tension of the arch wire.

13 Separable securing means:

This subclass is indented under subclass 10. Subject matter wherein the arch wire may be rigidly connected to the bracket by a readily removable retaining element.

(1) Note. The retaining element must be readily removable from both the arch wire and the bracket.

14 Lock pin:

This subclass is indented under subclass 13. Subject matter wherein the removable retaining element comprises a rigid member which is substantially elongated relative to any lateral dimension.

15 Ligature wire:

This subclass is indented under subclass 13. Subject matter wherein the removable retaining element comprises a length of metallic strand

which is adapted to be wrapped around the arch wire and a portion of the bracket.

(1) Note. Patent claiming brackets having structure for accommodating ligature wire have been placed as originals in this subclass; i.e., the ligature wire need not be claimed.

16 Having adjustable or angular arch wire guide:

This subclass is indented under subclass 8. Subject matter wherein the bracket includes a wire engaging surface for locating or orienting the arch wire or similar force transmitting strand with respect to the tooth carrying the bracket, and either (a) the surface is adjustably carried by the bracket whereby it may assume any of an plurality of positions with respect to the bracket, or (b) the wire engaging surface forms an acute angle with the plane of occlusion whereby the arch wire or strand applies a torque to the tooth carrying the bracket.

17 Having arch wire enclosing guide (e.g., buccal tube):

This subclass is indented under subclass 8. Subject matter wherein the bracket includes an elongated member having a passage therein through which the arch wire is placed.

18 Means to transmit or apply force to tooth:

This subclass is indented under subclass 2. Subject matter relating to either (a) a strandlike member adapted to be secured to a bracket and placed under tension to apply force to a tooth, or (b) a device adapted to engage two brackets or teeth, or a bracket and arch wire, for creating a force between a tooth and arch wire.

19 Acting between upper and lower teeth:

This subclass is indented under subclass 18. Subject matter wherein the strandlike member or the force creating device is connected to a tooth on the maxillary arch and to a tooth on the mandibular arch to transmit or apply a force between the two teeth.

20 Arch wire:

This subclass is indented under subclass 18. Subject matter relating to a metallic strandlike member adapted to be secured to a bracket and placed under tension to apply force to a tooth.

21 Metallic spring:

This subclass is indented under subclass 18. Subject matter comprising a device for creating a force between two teeth or between a tooth and arch wire comprising a metallic element of sufficient elastic property that it recovers its original shape when released after being distorted.

SEE OR SEARCH CLASS:

267, Spring Devices, appropriate subclasses for springs in general.

22 Arch wire attachment:

This subclass is indented under subclass 2. Subject matter comprising a discrete element adapted to be secured to an arch wire.

23 Band:

This subclass is indented under subclass 2. Subject matter relating to an appliance element adapted to be positioned around substantially the entire circumference of a tooth for the purpose of securing a bracket thereto.

24 Method of positioning or aligning teeth:

This subclass is indented under subclass 2. Method including a step for correcting a malocclusion.

25 APPARATUS:

This subclass is indented under the class definition. Device or subcombination thereof for facilitating the replacement, treatment, or testing of either natural or artificial teeth.

(1) Note. The above apparatus do not remain in the patient's mouth after treatment.

(2) Note. This and indented subclasses are intended to collect patents to devices for performing specific dental steps (i.e., those performed by a dentist). Devices of a more general nature (e.g., molds, forming dies, etc.) which are used by technicians are classified elsewhere unless specifically provided for in this class (see search notes below).

SEE OR SEARCH THIS CLASS, SUBCLASS:

1, for apparatus peculiar to the treatment or replacement of the teeth of animals.

3, for a tool for manipulating an orthodontic appliance.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 167.1 for toothbrushes.

24, Buckles, Buttons, Clasps, etc., subclasses 305+ for combined fasteners, especially subclasses 326+ for dental chair fasteners.

29, Metal Working, subclasses 33+ and 650 for manufacturing apparatus which perform two or more diverse operations (as in the manufacture of dental prostheses); and subclasses 700+ for assembling and disassembling apparatus.

30, Cutlery, appropriate subclasses for hand held cutting implements in general. Class 433 will take cutting implements which are disclosed solely for use by a dentist.

118, Coating Apparatus, subclasses 200+ for toothbrushes provided with dentifrice supply means.

128, Surgery, subclasses 3+ for specula.

132, Toilet, subclasses 321+ for toothpicks and dental floss, and subclasses 308+ for a toilet kit including a toothbrush.

248, Supports, subclasses 637+ for machinery supports not peculiar to or including dental treating apparatus.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 2 for shaping means utilizing an anatomical body or portion thereof; and subclasses 175+ for investment molding apparatus.

451, Abrading, for abrading of dentures in a manufacturing or laboratory operation. Abrading or polishing natural teeth or mutually abrading upper and lower dentures is provided for in Class 433 (sole disclosure).

601, Surgery: Kinesitherapy, subclasses 136+ for gum massagers and subclasses 154+ for water getting devices for gums.

604, Surgery, subclasses 19+ for aspirating devices; and subclasses 181+ for handheld injecting devices.

606, Surgery, subclasses 79+ for orthopedic cutting instruments, subclass 116

for cutting means for marking animals, subclass 132 for skin cutting dermatomes; subclass 137 for cutting means used in animal sterilization, subclass 163 for cutting means used in debeaking or dehorning animals and subclasses 167+, for cutting instrument in general.

26 Tooth selection guide:

This subclass is indented under subclass 25. Apparatus comprising a common holder for displaying a plurality of artificial teeth for the purpose of choosing the proper color, shape, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

163, for an artificial tooth holder.

SEE OR SEARCH CLASS:

206, Special Receptacle or Package, subclass 63.5 for a special container, package, or carrying case for a dental implement, material or article.

27 Having condition sensor to transmit signal to regulate indicating device or controller:

This subclass is indented under subclass 25. Device wherein means are provided for detecting the random occurrence of a predetermined event and releasing, terminating, or modifying a flow of energy which in turn either produces a perceptible manifestation of the event, or regulates a control means (e.g., motor, valve, solenoid, etc.).

28 Switch or valve controlled by presence of device on support:

This subclass is indented under subclass 27. Apparatus including a holder for storing an implement, and wherein removal or replacement of the implement on the holder activates or regulates the controller.

29 Having means to emit radiation or facilitate viewing of the work:

This subclass is indented under subclass 25. Device including (a) means to increase the lighting intensity at selected areas, or (b) means to bend or reflect light waves to make characteristics of the device or work more readily discernable, or (c) means from which

electromagnetic radiation is directed at the work.

(1) Note. Mouth props, per se, are excluded.

SEE OR SEARCH THIS CLASS, SUBCLASS:

140, for mouth props.

SEE OR SEARCH CLASS:

128, Surgery, subclasses 3+ for specula; and subclass 23 for lamps.

250, Radiant Energy, appropriate subclass for X-ray sources, detectors and related apparatus, or methods of using such apparatus in dentistry for producing images of teeth.

362, Illumination, appropriate subclasses for lighting systems in general, especially subclasses 572+ and 577 for optic transmission fibers which modify light from a man-made source.

385, Optical Waveguides, appropriate subclasses for optic transmission fibers.

408, Cutting by Use of Rotating Axially Moving Tool, subclass 16 for drilling apparatus provided with means to facilitate viewing of the work.

30 Mirror:

This subclass is indented under subclass 29. Apparatus including a polished or smooth surface for forming an image by reflection.

SEE OR SEARCH CLASS:

359, Optics: Systems (Including Communication) and Elements, subclasses 838+ for mirrors in general, and dental mirrors without structure peculiar to dental use.

600, Surgery, subclasses 185+, 246, and 247+ for surgical mirrors, especially subclasses 246 and 247+ for oral mirrors.

31 Combined with other device:

This subclass is indented under subclass 30. Apparatus wherein the mirror is connected to a disparate dental device.

32 Having heater or electrode:

This subclass is indented under subclass 25. Device provided with either (a) means to raise the temperature of the device, work or environ-

ment, or (b) a conductor for establishing electrical contact with the work.

SEE OR SEARCH THIS CLASS, SUBCLASS:

215+, for methods of treating teeth by heat or electricity.

SEE OR SEARCH CLASS:

128, Surgery, subclasses 362+ for other light, thermal, or electrical application in surgery.

219, Electric Heating, appropriate subclasses for details of electrical heating devices in general.

606, Surgery, subclasses 2+ for light, subclasses 27+ for heat and subclasses 32+, for electrical applicators surgical instruments.

33 **Having support for patient or operator:**

This subclass is indented under subclass 25. Apparatus including means to support a patient or operator against the force of gravity.

SEE OR SEARCH CLASS:

5, Beds, subclass 600 for invalid beds and surgical patient supports.

297, Chairs and Seats, appropriate subclasses for dental chairs, per se.

378, X-Ray or Gamma Ray Systems or Devices, subclasses 38+, 168+, and 190+ for tables or chairs for supporting persons for X-ray diagnosis, and having means peculiar thereto.

34 **Having static product shaping surface (e.g., mold):**

This subclass is indented under subclass 25. Device comprising static structure for confining a settable fluent material that is allowed to contact said structure and harden into a specific contour.

SEE OR SEARCH THIS CLASS, SUBCLASS:

71, for bite trays wherein an impression is obtained by biting into a solid material.

SEE OR SEARCH CLASS:

249, Static Molds, subclass 54 for a mold for making a dental prosthesis.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 16+ for a process of molding or otherwise shaping a dental prosthesis.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 2 for shaping apparatus utilizing an anatomical body or portion thereof as a shaping surface, and particularly subclasses 175+ for investment molding apparatus for dentures.

35 **Having cooling means:**

This subclass is indented under subclass 34. Apparatus including means to carry heat away from the hardenable fluent material.

SEE OR SEARCH CLASS:

249, Static Molds, subclasses 79+ for molds having cooling passages.

36 **Having settable material dispenser or fill opening:**

This subclass is indented under subclass 34. Device including either a supply means for the settable fluent material or an orifice through which settable material is introduced into the static structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80+, for an intra-oral dispenser, per se.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 311+ for filling means having a coating receiver, other than a molding apparatus.

249, Static Molds, subclass 105 for a mold having static filling means in contact with the mold cavity.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 447+ for molding apparatus including a shaping surface and means feeding fluent stock thereto, see the collection to search notes thereunder.

37 **Intra-oral:**

This subclass is indented under subclass 34. Apparatus wherein the static structure is placed in the mouth of a patient to form a mold in con-

- junction with a surface inside the patient's mouth.
- 38 Comprising frame and flexible bib:**
This subclass is indented under subclass 37. Apparatus wherein the surface of the static structure which supports or contacts the settable fluent material comprises a thin strip of pliant material supported in a relatively rigid construction.
- 39 Deformable or flexible band (e.g., matrix):**
This subclass is indented under subclass 37. Apparatus comprising a thin strip of material adapted to be bent or flexed to define a mold cavity in conjunction with a surface.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
155, for matrix clamps.
226, for a method of filling a tooth.
- 40 Single tooth:**
This subclass is indented under subclass 37. Apparatus wherein the static structure forms a mold in conjunction with the surface of one tooth only.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
223, for a method of constructing a prosthetic crown including the step of forming an impression of the natural tooth stump.
- 41 Adjustable:**
This subclass is indented under subclass 37. Apparatus wherein means are provided to vary the position or orientation of a first portion of the static structure relative to a second portion to accommodate different patients.
- SEE OR SEARCH CLASS:
249, Static Molds, subclass 155 for adjustable molds for forming different size or shaped product.
- 42 Upper section relative to lower section:**
This subclass is indented under subclass 41. Apparatus wherein the first and second relatively movable portions are adapted to form maxillary and mandibular casts of the patient's mouth.
- 43 Pivotaly connected sections:**
This subclass is indented under subclass 41. Apparatus wherein the first and second portions are hingedly attached to one another for swinging movement about an axis.
- 44 Having positioning means or gauge:**
This subclass is indented under subclass 37. Apparatus including a dimensional reference or other means to facilitate exact placement of the static structure inside the patient's mouth.
- 45 Having means to facilitate assembly or disassembly:**
This subclass is indented under subclass 37. Device wherein means are provided to facilitate the putting together or taking apart of the various elements of the static structure.
- 46 Detachable handle:**
This subclass is indented under subclass 45. Apparatus wherein the static structure is provided with a specific portion by which a person may grasp the structure, and wherein the portion is readily removable from the remainder of the structure.
- SEE OR SEARCH CLASS:
16, Miscellaneous Hardware, subclasses 110+ for handles, per se.
- 47 Including release facilitating means:**
This subclass is indented under subclass 37. Device wherein the static structure includes means specifically provided to assist in separating the hardened fluent material from either the static structure or the mouth of the patient.
- SEE OR SEARCH CLASS:
249, Static Molds, subclass 66.1 for a mold having means to apply force to remove or release a product from a mold.
- 48 Mold material:**
This subclass is indented under subclass 37. Apparatus wherein the static structure is formed of a specified composition.
- 49 Work support:**
This subclass is indented under subclass 25. Apparatus comprising means to sustain the weight of a workpiece and which in turn is

adapted to be supported on a surface external to the patient.

- (1) Note. Tool and equipment supports are excluded from this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 77+, for storage or nonuse supporting means for dental apparatus.
163, for a hand-held work carrier.

SEE OR SEARCH CLASS:

- 269, Work Holders, appropriate subclasses for work holders not specifically provided for in the various treatment classes.

50 Including tool, marker, or coupling means therefor:

This subclass is indented under subclass 49. Apparatus provided with either (a) an implement to contact and modify the workpiece being supported, or (b) structure adapted to cooperate with an implement or secure an implement to the support.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 75+, for a tool guide carried by the operator or the workpiece itself.

SEE OR SEARCH CLASS:

- 269, Work Holders, subclass 48, 87+, and 290+ for other than dental work holders and which have a tool guide or coupling means.

51 Abrading tool or cutter:

This subclass is indented under subclass 50. Apparatus wherein the implement comprises a instrument which is rotated or otherwise moved while in contact with the surface of a workpiece to either (a) polish the surface or remove a portion of the surface by reducing the surface to powder or small fragments, or (b) penetrate the surface by a cutting edge or point.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 125, for a hand-held motor driven grinder or polisher.
142, for a hand manipulatable grinder or polisher.

SEE OR SEARCH CLASS:

- 451, Abrading, subclasses 364+ for a work holder for an abrading apparatus or process.

52 Including motor or power transmitting means:

This subclass is indented under subclass 49. Apparatus provided with a prime mover or means to receive the output of a prime mover.

SEE OR SEARCH CLASS:

- 451, Abrading, subclasses 114+ for abrading by mutual moving contact between plural work pieces held respectively by relatively moving work holders.

53 Including means to support plural workpieces for relative movement:

This subclass is indented under subclass 49. Apparatus comprising a common support having a first work carrying means for supporting a first workpiece and a second work carrying means for supporting a second work part, at least one of said work carrying means being movable on said common support toward or away from the other of said work carrying means.

SEE OR SEARCH CLASS:

- 269, Work Holders, subclass 45 for similar work holders not used in dentistry.

54 Articulator or attachment therefor:

This subclass is indented under subclass 53. Apparatus wherein the first and second work carrying means are specifically adapted to support maxillary and mandibular dental casts, respectively, and wherein the relative movement between the two work carrying means represents movement of the temporo-mandibular joints, or subcombinations peculiar thereto.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 196, for a method of using an articulator for positioning or aligning teeth.

55 Having visual indicator or recorder:

This subclass is indented under subclass 54. Apparatus wherein the articulator includes a scale or other markings which provide a visual

- reference to the position or movement of the holder or a portion thereof.
- 56 Including gauge or means for removably mounting gauge on support:**
This subclass is indented under subclass 54. Apparatus wherein the articulator includes either means providing a dimensional or angular reference, or structure for removably carrying such referencing means.
- 57 Including hinge having parts which cooperate in a manner allowing relative movement:**
This subclass is indented under subclass 54. Apparatus wherein the relative movement between the first and second work carrying means is governed by a joint which comprises a fulcrum carried by one of said work carrying means and a cooperating surface on the other of said work carrying means, wherein the fulcrum pivots and translates relative to the cooperating surface.
- 58 And resiliently biased:**
This subclass is indented under subclass 57. Apparatus including means to elastically urge the fulcrum against its cooperating surface.
- 59 Including adjustable incisal guide:**
This subclass is indented under subclass 54. Apparatus comprising a surface associated with one of the work carrying means which cooperates with a guide pin or analogous structure associated with the other of the work carrying means to cause lateral movement between the two work carrying means as they approach one another, and wherein said surface may be adjusted to assume a selected angle or position with respect to a horizontal plane.
- 60 Including means to secure workpiece on articulator:**
This subclass is indented under subclass 54. Apparatus wherein at least one of the first and second work carrying means includes structure for fastening a dental cast thereto.
- 61 Having pivot and additional adjustment between workpiece supporting means:**
This subclass is indented under subclass 54. Apparatus wherein the work carrying means are connected through a joint which allows relative swinging movement about an axis through the joint, and wherein the joint in turn is also movable relative to one of the work carrying means.
- 62 Additional pivot:**
This subclass is indented under subclass 61. Apparatus wherein the joint is mounted for swinging movement relative to one of the work carrying means about a second axis.
- 63 Rectilinear adjustment:**
This subclass is indented under subclass 62. Apparatus wherein the joint is also capable of adjustable movement in a straight-line fashion relative to one of the work carrying means.
- 64 Ball-and-socket:**
This subclass is indented under subclass 62. Apparatus wherein the joint comprises a spherical convex surface mated with a concave surface to allow relative swinging movement of the work carrying means in more than one plane.
- 65 Rectilinear adjustment only between supporting means and pivot:**
This subclass is indented under subclass 61. Apparatus wherein the joint is mounted for rectilinear movement along a second axis relative to one of said work carrying means.
- 66 Having lock or adjustable stop for pivoted work holder:**
This subclass is indented under subclass 54. Apparatus wherein the work carrying means are connected through a joint which allows relative swinging movement between the two work carrying means, and either (a) means are provided to selectively allow or prevent relative swinging movement between the two work carrying means, or (b) abutment means are provided to limit the extent of relative movement of the work carrying means about the joint, and wherein the abutment means is movable to vary the relative positions of the work carrying means.
- SEE OR SEARCH CLASS:
403, Joints and Connections, subclasses 83+ for articulated members lockable at fixed positions.

- 67 Workpiece supporting means between adjustable stop and pivot:**
This subclass is indented under subclass 66. Apparatus wherein an adjustable abutment means is provided at a greater radius from the joint than the work carrying means.
- 68 Having means to record or indicate jaw movement or position or dental occlusion:**
This subclass is indented under subclass 25. Apparatus including means to provide a representation of the position or movement of the mandible, or of the positions or alignment of a patient's teeth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
37+, for dental impressions trays.
140, for jaw positioners.
- 69 Jaw movement:**
This subclass is indented under subclass 68. Apparatus comprising means to provide a representation of maxillomandibular movement.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
55, for an articulator provided with means to record relative movement of the work (denture) carrying means.
- SEE OR SEARCH CLASS:
346, Recorders, appropriate subclasses for apparatus and methods in general for making records of the movement of instruments.
- 70 By transfer of material to teeth:**
This subclass is indented under subclass 68. Apparatus comprising means carrying a marking material which is transferred by contact to the teeth of a patient when the patient bites the material carrying means.
- 71 By deformation of material:**
This subclass is indented under subclass 68. Apparatus comprising a relatively easily deformed material or a holder therefor adapted to be contacted by the teeth of a patient to provide a visual representation of the patient's bite.
- 72 Having gauge or guide:**
This subclass is indented under subclass 25. Apparatus including either (a) dimensional or angular reference, or (b) a surface adapted to be contacted by another device (e.g., a tool) to govern the movement of the device.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
44, for an impression tray provided with a gauge.
55, for an articulator provided with a gauge having indicia thereon.
56, for an articulator having a gauge without indicia.
- SEE OR SEARCH CLASS:
33, Geometrical Instruments, subclasses 511+ for anatomical gauges; and subclasses 783+ for anatomical calipers.
- 73 Condylar referencing means (i.e., face bow):**
This subclass is indented under subclass 72. Apparatus comprising means specifically provided for transferring a dimension measured with respect to the temporo-mandibular joints.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
56, for an articulator provided with a face bow or means to mount or engage a face bow.
- 74 Dowel pin or positioner therefor:**
This subclass is indented under subclass 72. Apparatus comprising either (a) an elongated member for attachment to either an artificial tooth or base casting to ensure proper positioning of the tooth on the base following removal therefrom, or (b) a device for locating the member in the proper position on the tooth or base prior to fixing the member thereto.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
53, for dowel pin positioners having a support for the casting.
- 75 Having tool, marker, or coupling or guiding means therefor:**
This subclass is indented under subclass 72. Apparatus including either (a) an implement to contact and modify a workpiece, or (b) struc-

ture for cooperating with such an implement or for securing such an implement to the dimensional or angular reference means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

50, for similar devices which include a work supporting means as well as tool, marker, or coupling means therefore.

SEE OR SEARCH CLASS:

408, Cutting by Use of Rotating Axially Moving Tool, subclass 241 for drill guides of general utility; and subclass 202 for a depth limiting member.

76 Parallel drilling:

This subclass is indented under subclass 75. Apparatus wherein means are provided to guide a drill such that the hole formed thereby will be parallel to an adjacent hole.

(1) Note. Included herein are dental drills having plural parallel drilling bits.

SEE OR SEARCH CLASS:

408, Cutting by Use of Rotating Axially Moving Tool, subclass 46 for a parallel drill of general utility; and subclass 241 for drill guides.

77 Having storage or nonuse supporting means (e.g., tray, rack, cabinet, etc.):

This subclass is indented under subclass 25. Apparatus comprising means for stowing or carrying dental equipment or materials while they are not being used.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

28, for equipment supports having means to automatically activate a tool when it is removed from the support.
29, for dental stands equipped with illuminating means.
33, for a dental stand provided with a patient's or dentist's chair.
49+, for work supports.
108+, for a dental stand or bracket having means for retaining a tool carrying arm in an adjusted or stored position.

SEE OR SEARCH CLASS:

312, Supports: Cabinet Structure, appropriate subclasses for cabinet structure, per se, especially subclass 209 for dental equipment cabinets. Class 433 takes cabinets provided with specific dental equipment.

78 Including hose retractor:

This subclass is indented under subclass 77. Apparatus comprising means for moving a length of flexible conduit from an extended operable position to a stowed position.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 370+ for a reeling device, particularly subclasses 371+ for a spring powered reeling device.

79 Movably mounted tray or holder:

This subclass is indented under subclass 77. Apparatus including an equipment support which is externally attached to a supporting structure by means which allows relative movement between the support and its supporting structure.

SEE OR SEARCH CLASS:

108, Horizontally Supported Planar Surfaces, appropriate subclasses for movably mounted trays without specific dental structure (e.g., fluid conduits, controls, combined with dental chair, etc.).

80 Having intra-oral dispensing means:

Apparatus under subclass provided with a discharge outlet through which material passes from a supply into a patient's mouth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

28, for a syringe combined with a support and means for actuating a valve when the syringe is removed from the support.
36, for a dispenser claimed in combination with a mold.

SEE OR SEARCH CLASS:

- 118, Coating Apparatus, subclasses 200+ for toothbrushes with dentifrice supplying means.
- 128, Surgery, subclass 66 for hydrants (i.e., water picks and the like).
- 222, Dispensing, appropriate subclasses for dispensers in general. See particularly the search notes in the class definition for other classes having dispensers.
- 604, Surgery, subclasses 77+ for Intra-oral medicator; and subclasses 181+ for hypodermic syringes.

81 Endodontic:

This subclass is indented under subclass 80. Apparatus comprising means for dispensing material interiorly of a tooth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 102, for an endodontic broach.
- 224, for endodontic methods.

82 Combined with or attachment for work contacting tool or handpiece therefor:

This subclass is indented under subclass 80. Apparatus wherein the discharge outlet is provided in structure with either (a) includes a nondispensing means for contacting and modifying the work, or a handle for removably carrying a work contacting and modifying means or (b) is provided with means to connect the structure to a work contacting and modifying means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 30+, for dental mirrors having air outlets adjacent the mirror surface for removing debris therefrom.
- 100, for dental drills having means to circulate lubricant or coolant through the tool.

SEE OR SEARCH CLASS:

- 401, Coating Implements With Material Supply, appropriate subclasses for dentifrice dispensing tooth brushes.

- 408, Cutting by Use of Rotating Axially Moving Tool, subclasses 66+ for drilling apparatus which dispense coolant to the tool or work.

- 451, Abrading, subclass 488 for means to ventilate or cool an abrading tool or workpiece.

83 Having means to compact dispensed material:

This subclass is indented under subclass 82. Apparatus wherein the means for contacting and modifying the work comprises a surface for compressing the dispensed material into the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 118+, for motor driven pluggers.
- 151, for spring operated pluggers.
- 164, for hand manipulatable pluggers.

84 Power-driven tool having fluid control valve for dispensed material:

This subclass is indented under subclass 82. Apparatus wherein the dispensed material is liquid or gaseous and means are provided to regulate the flow through the discharge outlet.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 28, for a valve which is actuated by removing a dispenser from its nonuse supporting means.

SEE OR SEARCH CLASS:

- 137, Fluid Handling, for condition responsive valves and valves in fluid systems.
- 251, Valves and Valve Actuation, appropriate subclasses for valve and actuator structure, per se.

85 On or adjacent handpiece or handle:

This subclass is indented under subclass 84. Apparatus wherein an activator for the flow regulating means is located on or immediately adjacent to a portion of the device that is adapted to be gripped by the operator's hand while the device is in use.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
100, for fluid motor regulating valves on dental handpieces.
- 86 Ultrasonic tool:**
This subclass is indented under subclass 82. Apparatus wherein the work contacting means is caused to vibrate by the prime mover at a very high frequency that is above audibility limit of the human ear.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
119, for an ultrasonic tool, per se.
- SEE OR SEARCH CLASS:
601, Surgery: Kinesitherapy, subclasses 1+ for ultrasonic devices employed in kinesitherapy.
- 87 Dispenser externally mounted on tool or handpiece:**
This subclass is indented under subclass 82. Apparatus wherein the structure having the discharge outlet therein comprises a discrete device carried on the exterior of the treating device.
- 88 Dispensed material discharged by fluid current:**
This subclass is indented under subclass 80. Apparatus including means to direct a flow of fluid into contact with the material to be dispensed so that the fluid entrains or impels the material to carry or force the same into the patient's mouth.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 630+ for apparatus for dispensing material by a fluid current.
406, Conveyors: Fluid Current, appropriate subclasses for entrainment and transport of solid material by a fluid current.
451, Abrading, subclasses 75+ for sand-blasting apparatus.
- 89 Hand-held implement with material supply:**
This subclass is indented under subclass 80. Apparatus which is supported entirely by the hand of the operator while being used and includes a reservoir for containing the supply of material to be dispensed.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 372 for a supply container and pump.
604, Surgery, subclasses 77+ for intra-oral medicators.
- 90 Single charge device having plunger type ejector:**
This subclass is indented under subclass 89. Apparatus including a pistonlike member movable through either the reservoir or an additional chamber supplied from the reservoir to expel the material contained in said reservoir or chamber through the discharge outlet.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 386+ for dispensers comprising a container, discharge outlet and follower.
- 91 Having suction orifice:**
This subclass is indented under subclass 25. Apparatus including a nozzle at which a low pressure is created to draw air or material through or around a nozzle.
- SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, subclasses 300.1+ for devices which clean by suction.
604, Surgery, subclasses 131+ for surgical aspirators.
- 92 And suction pump or material separator:**
This subclass is indented under subclass 91. Apparatus including either (a) means for creating subatmospheric pressure at the nozzle, or (b) means for recovering and retaining the removed material from the air current.
- 93 And mouth prop, tongue guard depressor, or cheek spreader:**
This subclass is indented under subclass 91. Apparatus wherein the nozzle is adapted to remove material from the mouth of a patient and means are provided to either (a) brace the patient's mouth in an open position, (b) protect the patient's tongue or retain the tongue at the bottom of the mouth, or (c) hold the cheek away from adjacent teeth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

140, for a dental jaw, cheek, lip, or tongue positioner.

SEE OR SEARCH CLASS:

600, Surgery, subclasses 184+ for surgical specula.

94 And clamp or positioner:

This subclass is indented under subclass 91. Apparatus including means for holding or locating the nozzle in a desired position.

95 And control valve for suction:

This subclass is indented under subclass 91. Apparatus including means for regulating the vacuum strength at the nozzle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

84, for intra-oral dispensers provided with a fluid control valve.

98+, for dental apparatus having valves for actuating a fluid motor.

96 In flexible conduit or eduction tube:

This subclass is indented under subclass 91. Apparatus wherein the nozzle comprises an aperture located in a readily deformable length of conduit.

97 Having receptacle (e.g., cuspidor):

This subclass is indented under subclass 25. Apparatus including a basin or other container for receiving material.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, subclass 263 for a dental cuspidor, per se.

98 Including activator or regulator for controller or drive:

This subclass is indented under subclass 25. Apparatus wherein means are provided by which an energy flow or signal is initiated or modified to activate or otherwise regulate a motor or other controller (e.g., valve, solenoid, etc.).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

27+, for a condition responsive activator.

SEE OR SEARCH CLASS:

200, Electricity: Circuit Makers and Breakers, appropriate subclasses for switch or actuating structure, per se.

327, Miscellaneous Active Electrical Non-linear Devices, Circuits, and Systems, particularly subclasses 518+ for miscellaneous control circuits which can be used for handpieces or dental stands.

99 In handpiece:

This subclass is indented under subclass 98. Apparatus wherein an actuator for the means which initiates or modifies an energy flow or signal is carried on a hand-held device which includes either means to drive or to transmit power to a tool releasably secured thereto.

100 Fluid control valve:

This subclass is indented under subclass 99. Apparatus wherein the means for initiating or modifying an energy flow or signal comprises means for regulating the flow of a fluid which operates or drives a controller.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

85, for a handpiece provided with a valve for controlling a dispensed fluid.

101 Foot operated:

This subclass is indented under subclass 98. Apparatus wherein an actuator for the means which initiates or modifies an energy flow or signal is located near the floor and adapted to be actuated by the foot of an operator.

SEE OR SEARCH CLASS:

200, Electricity: Circuit Makers and Breakers, subclass 86.5 for foot operated electric switches.

251, Valves and Valve Actuation, subclass 295 for foot operated valves, per se.

318, Electricity: Motive Power Systems, subclass 551 for foot-operated motor controller systems having three or more positions.

102 Broach:

This subclass is indented under subclass 25. Apparatus comprising an elongated member having serrations or projections on the periphery thereof and adapted to be pulled and pushed inside of a natural tooth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 75, for a broach provided with a penetration gauge or stop.
- 81, for the combination of a broach and endodontic dispenser.
- 224, for a method of using a broach.

103 Having motor or means to transmit motion from motor to tool (e.g., "engine"):

This subclass is indented under subclass 25. Apparatus including either (a) a prime mover for driving a work contacting and modifying means, or (b) dynamic power transmission means between a prime mover and a work contacting and modifying means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 27, for a motor operated in response to a sensed condition.
- 52, for a motor driven work holder.
- 82+, for a motor operated tool combined with a dispenser.
- 98+, for a motor driven apparatus wherein an activator (i.e., switch or valve) is claimed.

104 Including lubricating or apparatus cooling means:

This subclass is indented under subclass 103. Apparatus wherein means are provided either (a) to apply a substance between moving parts of the apparatus which are in contact to reduce the friction therebetween, or (b) to carry heat away from the apparatus.

- (1) Note. Apparatus which dispense the lubricating or cooling liquid into the patient's mouth will be found in the dispensing subclasses above.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 82+, for motor operated tools which dispense the cooling or lubricating fluid into the patient's mouth.

SEE OR SEARCH CLASS:

- 384, Bearings, subclasses 313+ for cooling a bearing by a lubricant and subclasses 317+ for cooling a bearing by means other than lubricant.
- 408, Cutting by Use of Rotating Axially Moving Tool, subclasses 66+ for cooling or drilling apparatus in general.
- 451, Abrading, subclass 488 for abrading apparatus combined with cooling means.

105 Including clutch or variable transmission:

This subclass is indented under subclass 103. Apparatus including either (a) a selectively engageable drive between the prime mover and tool, or (b) means to vary the ratio of the speed of movement of the prime mover's working member to the speed of movement of the tool.

SEE OR SEARCH CLASS:

- 74, Machine Element or Mechanism, subclasses 640+ for gearing.
- 192, Clutches and Power-Stop Control, subclasses 30+ for a clutch, per se.
- 408, Cutting by Use of Rotating Axially Moving Tool, subclasses 124+ and 139 for drilling apparatus having clutches or variable speed transmissions, especially subclass 133 for plural speed drives.
- 474, Endless Belt Power Transmission Systems or Components, appropriate subclasses for variable speed transmission using a belt drive.

106 Including braking means:

This subclass is indented under subclass 103. Apparatus wherein means are provided to decelerate the motor, tool, or transmission means.

SEE OR SEARCH CLASS:

- 188, Brakes, appropriate subclasses for braking means, per se.

107 Including means to apply counter force to counteract tool weight or movement:

This subclass is indented under subclass 103. Apparatus including an elongated bracket for movably connecting a tool or handpiece to a standard, wall or other support, and means are provided to offset the moment or inertia of the tool at the end of the bracket.

SEE OR SEARCH CLASS:

- 248, Supports, subclass 162.1 for counterbalanced stands; and subclasses 280.11 and 292.11 for counterbalanced brackets in general.
- 408, Cutting by Use of Rotating Axially Moving Tool, subclass 235 for means to counterbalance a drill or drill supporting structure.

108 And means to retain standard, arm, or handpiece in adjusted or stored position:

This subclass is indented under subclass 103. Device wherein the prime mover or power transmission means is carried by either an adjustable floor supported columnar structure, an adjustable elongated bracket or a hand-held tool chuck, and means are provided to releasably hold or support the columnar structure, bracket, or chuck in a predetermined position.

SEE OR SEARCH CLASS:

- 248, Supports, subclass 127 for adjustable stands; and subclasses 274.1+ for adjustable brackets.

109 Pivotally adjustable:

This subclass is indented under subclass 108. Apparatus wherein the columnar structure, bracket, or chuck are swingably attached to an adjacent supporting structure to permit swinging movement to the supported or held position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 79, for a swingably mounted tray or tool holder.

110 Endless belt transmission:

This subclass is indented under subclass 103. Apparatus including a dynamic power transmission means which comprises an endless

flexible member to transmit rotary or oscillatory motion from a prime mover to a tool.

SEE OR SEARCH CLASS:

- 408, Cutting by Use of Rotating Axially Moving Tool, subclass 128 for belt and pulley driven drilling apparatus.
- 474, Endless Belt Power Transmission Systems or Components, appropriate subclasses for an endless belt power transmission; and particularly subclasses 58+ for a system wherein a power output pulley is selectively shiftable to different power output locations relative to an input pulley.

111 Having tensioning means:

This subclass is indented under subclass 110. Apparatus including means to adjust the tension of the endless flexible member.

SEE OR SEARCH CLASS:

- 474, Endless Belt Power Transmission Systems or Components, particularly subclasses 101+ for a belt tensioner for an endless belt transmission.

112 Flexible shaft transmission:

This subclass is indented under subclass 103. Apparatus including a dynamic power transmitting means comprising an elongated member which is readily deformable in a direction perpendicular to its length.

SEE OR SEARCH CLASS:

- 408, Cutting by Use of Rotating Axially Moving Tool, subclass 127 for flexible shaft driven drilling apparatus.
- 464, Rotary Shafts, Gudgeons, Housings, and Flexible Couplings for Rotary Shafts, appropriate subclasses for flexible rotary shafts used in torque transmission.

113 Having treadle:

This subclass is indented under subclass 103. Apparatus including a swiveling or lever device adapted to be depressed by the foot and which operates the drive for a tool.

SEE OR SEARCH CLASS:

- 74, Machine Element or Mechanism, subclass 512 and 561 for treadle linkage systems, per se.

- 408, Cutting by Use of Rotating Axially Moving Tool, subclass 136 for treadle powered drilling apparatus.
- 451, Abrading, subclass 341 for treadle actuated abrading apparatus.
- 114 Hand-held tool or handpiece:**
This subclass is indented under subclass 103. Apparatus comprising either (a) a hand-held device having a driven work contacting and modifying means, or (b) a hand-held chuck for removably holding a driven work contacting and modifying means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 29+, for a hand-held tool or handpiece provided with means to facilitate viewing of the work.
- 50+, for a tool combined with means to support the work.
- 75+, for a tool provided with a gauge or guide.
- 82+, for a hand-held tool or handpiece provided with a dispenser (which may dispense the motive fluid).
- 99+, for a hand-held tool or handpiece provided with an activator (e.g., switch or valve).
- 115 Having seal:**
This subclass is indented under subclass 114. Apparatus including a substance or member employed specifically to block the passage of material into or out of the tool or handpiece.
- SEE OR SEARCH CLASS:
- 277, Seal for a Joint or Juncture, for a generic sealing means or process.
- 384, Bearings, subclasses 130+ for bearings with a seal.
- 415, Rotary Kinetic Fluid Motors or Pumps, subclasses 110+ and 170.1 for seals employed in rotary fluid motors other than Class 433 type.
- 416, Fluid Reaction Surfaces (i.e., Impellers), subclass 174 for a seal between an impeller or shaft and a static part.
- 116 Having cover or guard:**
This subclass is indented under subclass 114. Apparatus including means carried by the tool hand-held or handpiece either to protect the tool or handpiece, or to protect the patient or operator from contact with a tool.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 136+, for means to protect a tooth or the mouth from an adjacent work area.
- SEE OR SEARCH CLASS:
- 451, Abrading, subclasses 451+ for a cover or work guard for an abrading apparatus.
- 117 Including shock absorbing or vibration dampening means:**
This subclass is indented under subclass 114. Apparatus wherein the handpiece or hand tool includes means to reduce the transmission of vibration or sudden forces along the tool or handpiece.
- SEE OR SEARCH CLASS:
- 173, Tool Driving or Impacting, subclasses 210+ for impacting tools provided with cushioning means; and subclass 162 for tool drive means in general provided with vibration dampening means.
- 408, Cutting by Use of Rotating Axially Moving Tool, for drilling apparatus in general wherein the tool carrier is provided with vibration dampening means.
- 118 Having reciprocating, vibrating, or oscillating output:**
This subclass is indented under subclass 114. Apparatus wherein the prime mover or power transmission means causes a work contacting surface of a tool driven thereby to move back and forth along a straight-line or arcuate path.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 151, for spring operated pluggers.
- SEE OR SEARCH CLASS:
- 74, Machine Element or Mechanism, appropriate subclasses for mechanical movements, per se (e.g., rotary motion to reciprocating motion).
- 173, Tool Driving or Impacting, appropriate subclasses for reciprocating tool drives in general.

- 601, Surgery: Kinesitherapy, subclasses 46+ for vibrators; and subclasses 84+ for other kinesitherapeutic devices having specific movement.
- 119 Ultrasonic:**
This subclass is indented under subclass 118. Apparatus wherein the tool is vibrated at a very high frequency that is above the audibility limit of the human ear.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
86, for an ultrasonic tool combined with a dispenser.
- SEE OR SEARCH CLASS:
310, Electrical Generator or Motor Structure, subclasses 311+ for ultrasonic transducers, per se.
601, Surgery: Kinesitherapy, subclasses 1+ for ultrasonic kinesitherapeutic devices.
- 120 Fluid motor:**
This subclass is indented under subclass 118. Apparatus wherein the means to drive the tool comprises structure which converts the energy of a working fluid into movement of a working member to drive the tool.
- SEE OR SEARCH CLASS:
91, Motors: Expansible Chamber Type, appropriate subclasses for a fluid motor, per se.
601, Surgery: Kinesitherapy, subclasses 46+ for fluid motor driven vibrations; and subclasses 88+, 96, and 105 for other kinesitherapeutic devices driven by fluid motors.
- 121 Impact by sudden release of spring:**
This subclass is indented under subclass 118. Apparatus including a resilient member which alternately stores and releases energy from the prime mover or power transmission to drive the tool.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
151, for a hand manipulatable impact delivering tool which employs a spring which stores an energy input from the operator.
- SEE OR SEARCH CLASS:
173, Tool Driving or Impacting, subclasses 202+ for a spring driven hammerhead adapted to drive a tool.
- 122 Having rotating cam or eccentric:**
This subclass is indented under subclass 118. Apparatus comprising power transmission means which includes a driven member having a surface which is so arranged about an axis as to cause a cooperating member to be reciprocated to drive the tool.
- SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, subclass 53, 54, and 55+ for mechanical movements of the rotary to or from reciprocating or oscillating type which include a cam.
173, Tool Driving or Impacting, subclasses 122+ for a tool driving hammer reciprocally driven through a linkage which includes a cam or eccentric.
- 123 And adjustment for stroke, intensity, or position of tool:**
This subclass is indented under subclass 122. Apparatus including means whereby one of the following may be varied: (a) the distance the tool travels during each reciprocation, (b) the impact with which the tool strikes the work, or (c) the orientation or attitude of the tool with respect to the hand engaged portion of the device.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
105, for tools or handpieces provided with a clutch to disengage the drive from a tool or chuck.
130, for a rotary hand tool or handpiece provided with an adjustable head.
- SEE OR SEARCH CLASS:
173, Tool Driving or Impacting, subclass 115 for a tool driving hammer element wherein means are provided to selectively vary the length of cyclic travel; and subclass 120 for a spring driven tool driving hammer element wherein means are provided to adjust the spring force.

124 Angularly offset tool:

This subclass is indented under subclass 118. Apparatus wherein the longitudinal axis of the handpiece or the handle of the hand-held tool is angularly offset with respect to the movement axis of the tool.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

133, for a handpiece for driving a rotary tool wherein the axis of rotation of a tool held therein is angularly offset with respect to the longitudinal axis of the handle.

125 Having abrading or polishing means:

This subclass is indented under subclass 114. Apparatus including a driven work contacting or modifying means adapted to either smooth a surface by friction or to reduce a surface to powder or small fragments by a plurality of natural cutting edges.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

142, for hand-held grinder or polisher that is not power-driven.

SEE OR SEARCH CLASS:

451, Abrading, subclasses 344+ for a hand-held grinding or polishing device.

126 Having means facilitating assembly or disassembly of tool or handpiece:

This subclass is indented under subclass 114. Apparatus wherein means are provided to facilitate the putting together or taking apart of distinct elements of the apparatus.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

146, for a hand manipulatable implement provided with means to facilitate assembly or disassembly of the implement.

127 Means to releasably grip tool:

This subclass is indented under subclass 126. Apparatus including a chuck for releasably holding a work contacting and modifying means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

147, for a hand manipulatable tool having a removable tool element or bit.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, appropriate subclasses for tool chucks in general. See particularly the search notes under the class definition.

408, Cutting by Use of Rotating Axially Moving Tool, subclasses 239+ for drill chucks.

128 Comprising locking means extending into groove or recess:

This subclass is indented under subclass 127. Apparatus wherein the chuck includes a movable member adapted to engage an indentation formed in the work contacting and modifying means to retain the work contacting and modifying means in the chuck.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, subclasses 76+ for nondental tool chucks of similar structure.

129 Including axially movable collect to cam fingers:

This subclass is indented under subclass 127. Apparatus wherein the means for releasably holding a working contacting or modifying means comprises a plurality of gripping elements adapted to grip the periphery of the work contacting and modifying means by moving a member which surrounds said gripping elements to urge them inwardly to grip the work contacting and modifying means.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, subclasses 9.1+ for nondental tool chucks of similar structure.

130 Having adjustable head:

This subclass is indented under subclass 114. Apparatus wherein a joint is provided between the handle and proximal end of the hand held-tool or handpiece which allows the longitudinal axis of the work contacting and modifying means to assume any one of the plurality of

selected positions with respect to the longitudinal axis of the handle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

123, for reciprocating, vibrating, or oscillating hand tools provided with adjustable heads.

131 **Having motor:**

This subclass is indented under subclass 114. Apparatus wherein the hand-held tool or handpiece is provided with a prime mover to drive the work contacting and modifying means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

98+, for a hand-held tool or handpiece having a motor and wherein an activator (i.e., switch or valve) is claimed.

SEE OR SEARCH CLASS:

310, Electrical Generator or Motor Structure, subclass 40 for miniature motors.

132 **Rotary fluid turbine:**

This subclass is indented under subclass 131. Apparatus wherein the prime mover comprises a disc or shaft which is rotated about an axis by a current of fluid directed against a series of reaction surfaces formed or carried on the disc or shaft.

SEE OR SEARCH CLASS:

415, Rotary Kinetic Fluid Motors or Pumps, appropriate subclasses for rotary fluid turbine motors, per se. See particularly subclass 904 for a tool drive turbine art collection.

416, Fluid Reaction Surfaces (i.e., Impellers) appropriate subclasses for turbine rotor structure.

133 **Contra angled handpiece:**

This subclass is indented under subclass 114. Apparatus comprising an elongated handpiece having a longitudinal axis angularly offset with respect to the longitudinal axis of the tool.

SEE OR SEARCH THIS CLASS, SUBCLASS:

124, for a reciprocating, vibrating, or oscillating angularly offset tool.

134 **Arbor:**

This subclass is indented under subclass 103. Apparatus comprising a member having a first portion adapted to be received in a motor driven chuck, and a second portion adapted to releasably hold a tool bit.

SEE OR SEARCH THIS CLASS, SUBCLASS:

127+, for tool gripping features of dental handpieces.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, appropriate subclasses for an arbor in general.

451, Abrading, subclasses 490+ for a grinding tool support.

135 **Screw actuated clamp for apertured tool bit:**

This subclass is indented under subclass 134. Apparatus wherein the second portion adapted to releasably hold a tool bit includes helically ribbed means adapted to be inserted through an opening in the tool bit and rotated to secure the tool bit to the arbor.

136 **Having absorption means or means to isolate tooth or mouth from adjacent area (e.g., bib, dam, etc.):**

This subclass is indented under subclass 25. Apparatus including either (a) a piece of material adapted to be placed inside the mouth to absorb fluids, or (b) means for covering a tooth, mouth or other area of a patient to protect the same against injury or debris, or (c) means to engage and retain (a) or (b) in or adjacent the work area.

SEE OR SEARCH CLASS:

2, Apparel, subclasses 46+ and 455 for guards and protectors.

137 **Bib:**

This subclass is indented under subclass 136. Apparatus comprising means for covering an area of the patient externally of the mouth.

SEE OR SEARCH CLASS:

2, Apparel, subclasses 46+ for a garment protector.

138 And discrete oral fastening or positioning means:

This subclass is indented under subclass 136. Apparatus including means readily separable from the absorption or isolating means to removably attach or orient the absorption or isolation means to the patient's mouth.

139 Tooth clamp:

This subclass is indented under subclass 138. Apparatus wherein the attaching means is adapted to be fastened to a tooth inside the patient's mouth.

- (1) Note. Patents reciting a clamp and any structure which recognizes the presence of an absorption or isolating device have been placed as originals in this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

153+, for miscellaneous clamps used in dentistry.

SEE OR SEARCH CLASS:

24, Buckles, Buttons, Clasps, etc., subclasses 305+ for combined fasteners.

140 Jaw, cheek, lip, or tongue positioner:

This subclass is indented under subclass 25. Apparatus comprising means to engage and retain either the mandible cheek, lip, or tongue, in a desired position.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 29+, for mirror or means to increase the lighting intensity in the vicinity of the work, excluding mouth props, per se.
68, for an adjustable mouth prop provided with a gauge to indicate jaw position.
93, for similar structure combined with a suction orifice.
138+, for a dam clamp provided with means to retain the jaw, tongue, etc., in a desired position.

SEE OR SEARCH CLASS:

600, Surgery, subclasses 238+ for surgical specula without structure peculiar to dental use.

141 Hand manipulatable implement:

This subclass is indented under subclass 25. Apparatus which is carried and actuated by the hand.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 3+, for orthodontic implements.
30+, for dental mirrors, per se, and combined with other implements.
72+, for gauges and implements combined therewith.
102, for endodontic broaches.

SEE OR SEARCH CLASS:

- 81, Tools, appropriate subclasses for hand tools of both general purposes and specific application which are not provided for elsewhere. Class 433 will take any hand tool wherein the sole disclosure is for use by a dentist.
606, Surgery, subclasses 1+ for surgical instruments.

142 Having abrading or polishing means:

This subclass is indented under subclass 141. Apparatus including a work contacting and modifying means adapted to either smooth a surface by friction or to reduce a surface to powder or small fragments by a plurality of natural cutting edges.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 125, for a motor driven abrading or polishing means.

SEE OR SEARCH CLASS:

- 132, Toilet, subclass 75.6 and 76.5+ for manicuring abrading implements.
451, Abrading, subclasses 523+ and 557+ for a manually manipulated abrading tool.

143 Scaler:

This subclass is indented under subclass 141. Apparatus specifically adapted for scraping deposits from teeth.

144 Having cutter:

This subclass is indented under subclass 141. Apparatus having a man made cutting edge or point.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
1, for veterinary cutters.
- SEE OR SEARCH CLASS:
30, Cutlery, appropriate subclasses for hand manipulatable cutters.
606, Surgery, subclasses 167+ for surgical cutting instruments.
- 145 Including force multiplier:**
This subclass is indented under subclass 144. Apparatus including structure (e.g., screw, lever, etc.) by which the force input from the hand of the operator may be increased at the cutter.
- SEE OR SEARCH CLASS:
30, Cutlery, subclasses 175+ for nippers; and subclasses 194+ for shears.
- 146 Having means facilitating assembly or disassembly:**
This subclass is indented under subclass 141. Apparatus wherein means are provided to facilitate the putting together or taking apart of two or more distinct portions of the implement.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
126+, for motor operated hand-held tools provided with means to facilitate assembly or disassembly of the tool.
- 147 Removable tool element:**
This subclass is indented under subclass 146. Apparatus including a distinct work contacting and modifying portion and means to facilitate the assembly and disassembly of said portion and the remainder of the implement.
- 148 Separator:**
This subclass is indented under subclass 141. Apparatus comprising means to apply oppositely directed forces against opposing faces of adjacent teeth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
2+, for an orthodontic appliance to be worn by the patient over a period of time to permanently move one tooth relative to another.
- SEE OR SEARCH CLASS:
29, Metal Working, subclass 239 for disassembly apparatus for spreading parts apart or separating them from face to face engagement; and subclasses 244+ for other disassembly tools with force multiplying operators.
- 149 Comprising tooth contacting wedge or wedge actuator:**
This subclass is indented under subclass 148. Apparatus comprising a member having a tapering width and which is forced in a directing parallel to the opposing faces of two teeth to move the teeth.
- SEE OR SEARCH CLASS:
29, Metal Working, subclass 253 for assembly or disassembly apparatus having a wedge actuator.
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclass 104 which is the residual locus for wedges.
- 150 Impacting means:**
This subclass is indented under subclass 141. Apparatus including means to impart a blow to a workpiece.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
118+, for motor driven impacting devices.
- SEE OR SEARCH CLASS:
29, Metal Working, subclasses 254+ for assembly or disassembly tools with an impact operator; and subclasses 275+ for those having a surface adapted to receive a blow from a hammer.
81, Tools, subclasses 52.3+ for impacted delivering tools.
- 151 By sudden release of spring:**
This subclass is indented under subclass 150. Apparatus including a resilient member which stores energy supplied by the hand of an operator, which energy is subsequently released to impart a blow to the work.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
121, for motor-driven tools which deliver an impact by sudden release of a spring compressed by the motor.
- 152 Including work penetrating portion to secure tool to work:**
This subclass is indented under subclass 141. Apparatus which is attached to a workpiece by a workpiece piercing member.
- SEE OR SEARCH CLASS:
29, Metal Working, subclasses 244+ for disassembly tools having a force multiplier, especially subclasses 264 and 281 for those having a screw-threaded work engager.
- 153 Having relatively movable work engaging surfaces:**
This subclass is indented under subclass 141. Apparatus including a plurality members, each having a work contacting face, and structure connecting the members which permits relative displacement between the work contacting faces.
- SEE OR SEARCH CLASS:
81, Tools, subclasses 300+ for tools in general having jaws positioned by relatively moving handles and subclass 487 for other hand-held tools having a clamp.
- 154 Three or more relatively movable coaxing surfaces:**
This subclass is indented under subclass 153. Apparatus including three members, each having a work contacting face and wherein the structure connecting the members permits each of the work contacting faces to be displaced relative to the work contacting faces.
- (1) Note. As an example, tooth or pin extractors having two clamping jaws for engaging a tooth or pin and a pivoted fulcrum or other member for engaging an adjacent area whereby a force is exerted on the clamping jaws, are found in this subclass.
- SEE OR SEARCH CLASS:
81, Tools, subclass 303 for pliers and the like having three or more jaws.
- 155 Work accommodating slot or opening through surface (e.g., matrix clamp):**
This subclass is indented under subclass 154. Apparatus wherein at least one of the members has an aperture or slot through which a portion of the work may pass.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
39, for matrix clamps wherein the matrix band is claimed.
- 156 Including contoured work shaping surface:**
This subclass is indented under subclass 153. Apparatus wherein one of the work contacting faces has a shape which is imparted to a workpiece by displacing the faces relative to each other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
34+, for dental devices having a static product shaping surface.
- SEE OR SEARCH CLASS:
72, Metal Deforming, subclasses 409.01+ for contoured metal shaping pliers.
81, Tools, subclasses 424.5+ for work conforming tool jaw faces for gripping work.
- 157 Pivoted:**
This subclass is indented under subclass 153. Apparatus wherein the structure connecting the members defines a first pivot axis about which the work contacting faces on the elongated members are adapted to swing.
- 158 Having actuating screw:**
This subclass is indented under subclass 157. Apparatus including an elongated helically ribbed member which when rotated causes the work contacting face to pivot about the bearing surface.
- SEE OR SEARCH CLASS:
81, Tools, subclasses 388+ and 395+ for tools having screw-actuated pivoted jaws.

159 Having handles to pivot surfaces (e.g., pliers):

This subclass is indented under subclass 157. Apparatus comprising two elongated members pivotally connected at points intermediate their length, each having a handle at one side of the pivot and the work contacting face on the opposite side of the pivot.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

4, for orthodontic pliers.

SEE OR SEARCH CLASS:

29, Metal Working, subclass 268 for pliers for assembling or disassembling parts.

81, Tools, subclasses 300+ for pliers of general purpose or specific use and not provided for elsewhere.

606, Surgery, subclasses 205+ for forceps.

160 Plural pivots:

This subclass is indented under subclass 159. Apparatus wherein a second pivot is provided spaced from the first pivot and which connects two elements of the apparatus for relative swinging movement.

SEE OR SEARCH CLASS:

81, Tools, subclasses 350+, 367+, and 424 for pliers in general provided with plural pivots.

161 Screw actuated:

This subclass is indented under subclass 153. Apparatus including an elongated helically ribbed member that when rotated moves the work contacting faces.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

139, for screw actuated tooth clamps.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 256+ for screw-actuated assembly or disassembly tools.

162 Resiliently biased:

This subclass is indented under subclass 153. Apparatus wherein the work contacting faces are elastically urged to a desired position after they are moved from said position.

SEE OR SEARCH CLASS:

81, Tools, subclass 427 for pliers having resiliently urged handles.

294, Handling: Hand and Hoist-Line Implements, for tweezers in general.

606, Surgery, subclasses 210+ for tweezers in general.

163 Work carrier:

This subclass is indented under subclass 141. Apparatus including a surface which is provided to support dental work or material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

26, for a tooth selection guide comprising a holder for one or more tooth models.

153, for carriers having relatively movable surfaces to grip the work.

SEE OR SEARCH CLASS:

294, Handling: Hand and Hoist-Line Implements, appropriate subclasses for handheld article carriers and manipulators in general.

164 Plugger:

This subclass is indented under subclass 141. Apparatus including a surface adapted to be pressed against a filling in a tooth to compact the filling material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

83, for pluggers with filling dispensers.

118+, for motor operated pluggers.

150, for hand manipulatable pluggers having a spring or other impact delivering or receiving means.

165 Tool bit:

This subclass is indented under subclass 25. Apparatus comprising a work contacting and modifying element adapted to be received in a chuck or socket whereby the element may be driven or manipulated.

SEE OR SEARCH CLASS:

- 407, Cutters, for Shaping, appropriate subclasses for work shaping tool in general (other than wood); see especially subclasses 53+ for face or end mill cutters.
- 408, Cutting by Use of Rotating Axially Moving Tool, subclasses 199+ for drill bits in general.

166 Abrading or polishing:

This subclass is indented under subclass 165. Apparatus wherein the work contacting and modifying element is adapted to either smooth a surface by friction or reduce a surface to powder or small fragments by a plurality of natural cutting edges.

SEE OR SEARCH CLASS:

- 451, Abrading, subclasses 526+ for a flexible member abrading tool and subclasses 540+ for a rigid abrading tool.

167 PROSTHODONTICS:

This subclass is indented under the class definition. Subject matter relating to artificial teeth.

- (1) Note. Utilization of an existing tooth or portion thereof for purpose other than fastening adjacent artificial teeth is considered repair rather than replacement.
- (2) Note. Methods for making dental prostheses are proper for Class 433 if they include specific dental steps (e.g., impression taking, fitting the patient with the denture, etc.). Generally, those process claims which recite only manufacturing steps will be classified in the appropriate manufacturing class (see search notes below). A claim to a dental prosthesis, per se, is properly classified in this class if significant structure is recited.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 25, for apparatus employed in the process of replacing missing teeth with artificial teeth.
- 215+, for a method or material for replacing a portion of a natural tooth.

SEE OR SEARCH CLASS:

- 29, Metal Working, subclasses 400.1+ for processes of mechanical manufacture including diverse manufacturing steps.
- 72, Metal Deforming, appropriate subclasses for a method or apparatus for die shaping a denture base or other prosthodontic element.
- 106, Compositions: Coating or Plastic, subclass 35 for plastic or coating compositions used in dental prostheses.
- 164, Metal Founding, appropriate subclasses for a method of casting a prosthodontic element.
- 205, Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions, subclasses 67+ for electroforming methods for production of dentures.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 16+ for a process for forming a denture or element thereof.
- 520, Synthetic Resins or Natural Rubbers, appropriate subclasses, particularly Class 523, subclasses 105+ for non-medicated compositions containing a synthetic resin having utility specifically intended to be for contact with animal living tissue, especially subclasses 109 and 113-120 for dental compositions or to processes of preparing said compositions.

168.1 Denture liner or cushion:

This subclass is indented under subclass 167. Subject matter relating to the provision of a soft layer or pad of material on the mouth contacting surface of a denture.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 199.1, for laminated or other plural layer denture bases.

SEE OR SEARCH CLASS:

- 523, Synthetic Resins or Natural Rubbers, subclass 120 for a dentures plate liner specified only in terms of a composition of the type there provided for. (See Lines With Other Classes under

the main definition of Class 433 for the general line.)

169 Stress breaker:

This subclass is indented under subclass 167. Subject matter wherein a denture includes means to redirect or absorb forces during mastication to protect the denture from damage.

170 Between tooth engaging clasp and denture:

This subclass is indented under subclass 169. Subject matter including means to secure the denture in the mouth, which comprises opposing surfaces which are elastically urged against opposing exterior surfaces of an abutment tooth, and wherein the means to redirect or absorb mastication forces forms the connection between the denture and securing means.

171 Prefabricated denture:

This subclass is indented under subclass 167. Subject matter relating to a standard denture which is modified to conform to the individual patient.

172 Holding or positioning denture in mouth:

This subclass is indented under subclass 167. Subject matter relating to locating or securing one or more artificial teeth in the mouth.

- (1) Note. Patents in this subclass must relate to the connection between a denture and either a natural tooth or some part of the patient's mouth. Patents relating to the connection between a denture and an artificial tooth will be found in subclasses below.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 191, for a method or means for securing an artificial tooth to a base.
219, for a method or material for attaching a crown, per se, to a natural tooth.

173 By fastening to jawbone:

This subclass is indented under subclass 172. Subject matter wherein the denture is secured directly to the jawbone of the patient.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 201.1, for subject matter relating to the construction or composition of a dental implant.

174 By screw:

This subclass is indented under subclass 173. Subject matter wherein the denture is secured to the jawbone by an elongated helically ribbed member.

175 Shape of removed tooth root:

This subclass is indented under subclass 173. Subject matter wherein the lower portion of the denture that is secured to the jawbone is shaped to correspond to the configuration of the root of a natural tooth which had previously occupied the same position in the mouth.

176 By blade:

This subclass is indented under subclass 173. Subject matter wherein the denture is secured to the jawbone by a flat platelike member extending from the bottom of an artificial tooth.

177 By resiliently biased means:

This subclass is indented under subclass 172. Subject matter wherein denture is secured or located in the patient's mouth by means which includes a member that must be deformed elastically when applying the denture to the mouth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 169+, for a denture having resilient means to absorb the forces of mastication.

178 Tooth engaging clasp:

This subclass is indented under subclass 177. Subject matter wherein the locating or securing means includes opposing surfaces which are elastically urged against opposing exterior surfaces of a natural or artificial tooth.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 139, for a tooth clamp for holding a dam or absorption roll in place.
170, for a resilient tooth engaging clasp connected to a denture by a stress breaker.

- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., subclasses 530+ for resiliently biased clasps.
- 179 Acting between upper and lower denture:**
This subclass is indented under subclass 177. Subject matter wherein the elastically deformable means from a connection between an upper denture and a lower denture to bias them away from each other.
- 180 By cement or adhesive:**
This subclass is indented under subclass 172. Subject matter wherein a denture is secured in the patient's mouth by a settable fluent material or other binding substance.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
226+, for methods of treating or restoring natural teeth by filling or cementing.
- SEE OR SEARCH CLASS:
106, Compositions: Coating or Plastic, subclass 35 for dental filling or cement compositions devoid of a synthetic resin.
520, Synthetic Resins or Natural Rubbers, especially Class 523, subclasses 116+ for a composition containing a synthetic resin used as a cement or a filling; and subclass 120 for a composition to be used as a denture plate, adhesive, denture plate liner, or a denture plate cushion.
- 181 Including mating connectors on denture and abutment tooth:**
This subclass is indented under subclass 180. Subject matter wherein the denture is secured to a natural tooth by a settable fluent material and the denture and the natural tooth are provided with respective elements which cooperatively engage each other to supplement or reinforce the settable material bond.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
191, for connectors for securing artificial teeth together.
- 182 And additional member for securing connectors together:**
This subclass is indented under subclass 181. Subject matter wherein a third discrete element is provided for securing together the respective elements on the denture and natural tooth.
- 183 Including crown cemented to existing tooth:**
This subclass is indented under subclass 180. Subject matter wherein the denture has attached thereto a simulation of the exposed portion of a tooth, and the denture is secured in the mouth of fixing the simulation to the base of an existing natural tooth using a settable adhesive material.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
218, for crown construction or attachment to a natural tooth.
- 184 By suction:**
This subclass is indented under subclass 172. Subject matter wherein the denture is provided with means engaging a natural surface inside the mouth to form a chamber therewith, which chamber is placed under subatmospheric pressure to secure the denture in the mouth.
- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., subclasses 305+ for vacuum-type fasteners.
- 185 Including valve or air passageway leading from suction area:**
This subclass is indented under subclass 184. Subject matter wherein means are provided to selectively establish communication between the suction chamber and the environment.
- 186 Cup or disc:**
This subclass is indented under subclass 184. Subject matter wherein the means which engages a natural surface inside the mouth comprises a concave or flat, substantially rounded pliant member carried by but distinct from the base of the denture.
- 187 Plural cups or discs:**
This subclass is indented under subclass 186. Subject matter wherein a plurality of rounded pliant members are provided on the denture.

188 Suction area comprises recess or cavity formed in denture base:

This subclass is indented under subclass 184. Subject matter wherein the chamber is formed by a natural surface inside the mouth and an indentation formed in the denture base.

189 By magnetic material:

This subclass is indented under subclass 172. Subject matter wherein a denture is secured in the mouth of the patient by magnetic attraction between material carried by the denture and material inside the mouth.

SEE OR SEARCH CLASS:

24, Buckles, Buttons, Clasps, etc., subclass 304 for magnetic fasteners.

190 Connecting right and left segments of partial denture:

This subclass is indented under subclass 167. Subject matter relating to a connector for joining spaced bilateral parts of a maxillary or mandibular removable partial denture.

191 Attaching artificial tooth to base or adjacent artificial tooth:

This subclass is indented under subclass 167. Subject matter relating to the connection between an artificial tooth and an intra-oral common support for a plurality of teeth, or between two adjacent artificial teeth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

206, for subject matter relating to the connection between a tooth facing and backing wherein the backing may be connected to an adjacent backing to form a bridge.

192 By cavity in tooth for base material:

This subclass is indented under subclass 191. Subject matter wherein an artificial tooth having a hole or other indentation in surface is united to a common support for a plurality of such teeth by causing a portion of the support material to flow into the indentation and then harden.

193 Connected to base by discrete connecting member:

This subclass is indented under subclass 191. Subject matter wherein an individually distinct device forms the connection between an artificial tooth and a common support for a plurality of such teeth.

(1) Note. A metallic pin embedded in a porcelain facing and attached to the base is considered to be "individually distinct" as defined above. However, for the pin-to-facing connection, per se, see the search note below to subclasses 206+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

206+, for a metallic attachment to an artificial tooth, which may be a tooth to base connecting member (e.g., "connecting pin").

194 And additional discrete element for securing connecting member to tooth:

This subclass is indented under subclass 193. Subject matter wherein a second device which is individually distinct from the tooth, base, and connecting member forms the connection between the tooth and the connecting member.

195 Embedded in base material:

This subclass is indented under subclass 193. Subject matter wherein the individually distinct device which forms the connection between an artificial tooth and support is fixed to the material of the support by either forming the support material about the connecting device or by driving the connecting device into the support material.

196 Orienting or positioning teeth:

This subclass is indented under subclass 167. Subject matter relating to the determination of the precise location and attitude of an artificial tooth with respect to another artificial or natural tooth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

53+, for means to support and position plural workpieces relative to each other.

54+, for articulators.

- 68+, for means to record or indicate dental occlusion.
- 197 Cutting edge shape or arrangement:**
This subclass is indented under subclass 167. Subject matter relating to the profile or relative position or configuration of a masticating edge or surface of an artificial tooth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
202.1, for other subject matter relating to artificial tooth shape or composition.
- 198 Metallic cutting edge:**
This subclass is indented under subclass 197. Subject matter wherein the masticating edge or surface is formed from metal.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
206+, for a metallic tooth, tooth portion, or attachment wherein the specific cutting edge shape is not recited.
- 199.1 Denture base construction:**
This subclass is indented under subclass 167. Subject matter relating to the particular structure of an intraoral common support for a plurality of artificial teeth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
208, for a metallic backing for an artificial tooth, a plurality of which may be soldered together to form a base.
- SEE OR SEARCH CLASS:
106, Compositions: Coating or Plastic, subclass 35 for dental plastic or coating compositions wherein no significant denture structure is recited in the claims (i.e., the denture is only nominally recited).
520, Synthetic Resins or Natural Rubbers, particularly Class 523, subclasses 115+ for a composition containing a synthetic resin for use as a tooth or bone replacement, restorative, or implant or to processes or preparing said composition. (See Prostheses Or Appliances under the main definition of Class 433 for the line.)
- 200.1 Metallic:**
This subclass is indented under subclass 199.1. Subject matter wherein the common support is formed of metal.
- SEE OR SEARCH CLASS:
72, Metal Deforming, appropriate subclasses for method or apparatus for swaging dental plates.
420, Alloys or Metallic Compositions, for alloys or metallic compositions.
- 201.1 Dental implant construction:**
This subclass is indented under subclass 167. Subject matter relating to either the structure or a process of making a dental prosthesis which is adapted to be fixed to the jawbone.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
173+, for a method or structure for fastening an implant to the jawbone.
- SEE OR SEARCH CLASS:
520, Synthetic Resins or Natural Rubbers, particularly Class 523, subclasses 115+ for a composition containing a synthetic resin suitable for use as a tooth or bone replacement, restorative, or implant, or to processes of preparing said composition. (See Prostheses Or Appliances of the main definition of Class 433.)
- 202.1 Tooth construction:**
This subclass is indented under subclass 167. Subject matter relating to either the structure of or a process of adapted to be fixed to a base or an adjacent natural or artificial tooth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
218+, for construction or composition of a prosthetic crown.
- SEE OR SEARCH CLASS:
106, Compositions: Coating or Plastic, subclass 35 for dental plastic or coating composition wherein no significant structure is recited (i.e., a tooth is only nominally recited).

520, Synthetic Resins or Natural Rubbers, particularly Class 523, subclasses 115+ for a composition containing a synthetic resin for use as a tooth or bone replacement, restorative, or implant or to processes of preparing said composition. (See Prostheses Or Appliances of the main definition Class 433.)

203.1 Indicia, tinting or shading:

This subclass is indented under subclass 202.1. Subject matter relating to either (1) the provision of markings on the surface of the artificial tooth by which it may be identified, or (2) the hue or relative lightness of an artificial tooth to tooth portion.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

26, for a tooth shade or hue selection guide.
199.1, for methods and compositions for obtaining desired tinting or shading of denture bases.

SEE OR SEARCH CLASS:

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclass 20 for shaping or treating a tooth and providing a color or tone differential across the member. Class 433 provides for patents claiming the tooth itself.

204 Having means facilitating replacement of tooth portion:

This subclass is indented under subclass 202.1. Subject matter wherein the artificial tooth comprises two discrete portions, the connection between the portions being of such a nature to permit one portion to be readily removed from the remaining portion for repair or replacement.

(1) Note. The two "tooth portions" may comprise a porcelain facing and metallic backing.

205 Having plural piece backing or discrete connecting means for adjacent tooth portions:

This subclass is indented under subclass 202.1. Subject matter wherein the artificial tooth comprises either (a) a tooth facing and a plurality of

adjacent plate sections attached to the facing, or (b) a plurality of discrete tooth portions mechanically fastened together by means individually distinct from either tooth portion.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

193+, for a discrete connecting means between an artificial tooth and a base.
211, for a discrete connecting pin embedded in a tooth for attaching the tooth to a base or backing.

206 Metallic tooth, tooth portion, or attachment:

This subclass is indented under subclass 202.1. Subject matter wherein the artificial tooth is formed of metal or has fixed thereto a metallic device.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

198, for a tooth having a metallic cutting edge.

207 Alloy:

This subclass is indented under subclass 206. Subject matter wherein the metal is a homogeneous mixture of two or more different base metals.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

200, for denture bases formed from particular alloys.

SEE OR SEARCH CLASS:

420, Alloys or Metallic Compositions, subclasses 526+ for amalgams, per se, useful in making and filling teeth.

208 Metallic backing:

This subclass is indented under subclass 206. Subject matter relating to a plate or other covering formed of metal and adapted to be secured to the inside surface of an artificial tooth facing.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

191+, for an artificial tooth backing having specific means for connecting or facilitating the connection to an adjacent backing or base.

- 205, for a tooth facing connected to a metallic backing by a discrete connecting means.
- 209 Having dovetail, “t”, pinhead or bulbous protrusion extending in congruent recess in facing:**
This subclass is indented under subclass 208. Subject matter wherein the backing is provided with a protruding portion provided with an enlargement at its distal end having a cross sectional shape of a dovetail, “T”, pinhead, or bulb, the enlargement being placed in a correspondingly shaped recess in the tooth facing to unite the tooth facing and backing.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
181, for similarly shaped protrusions carried by dentures to secure the denture in the mouth.
- SEE OR SEARCH CLASS:
403, Joints and Connections, subclass 381 for corresponding connections between members other than teeth.
- 210 Having pin extending into facing:**
This subclass is indented under subclass 208. Subject matter wherein the backing is provided with a protruding portion adapted to be inserted into the tooth facing, and wherein the protruding portion is substantially elongated in a direction away from the backing relative to any lateral dimension of the portion.
- 211 Connecting pin:**
This subclass is indented under subclass 206. Subject matter wherein the artificial tooth has fixed thereto a metallic pin adapted to secure the tooth to a base or backing.
- (1) Note. This subclass contains subject matter relating to tooth facing to pin connections and connecting pin structure, per se.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
195, for patents showing or claiming the pin to base connection.
- 212.1 Nonmetallic composite:**
This subclass is indented under subclass 202.1. Subject matter wherein the artificial tooth comprises two distinct portions, each formed of a different nonmetallic material.
- (1) Note. See Prostheses Or Appliances in the main definition for the line with Chemical Composition Classes.
- 213 Preliminary casting, model, or trial denture:**
This subclass is indented under subclass 167. Subject matter relating to the formation or use of a positive likeness of part of the oral cavity for the purpose of constructing a finished dental prosthesis.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
34+, for molds.
49+, for work supports for measuring and working with models, especially subclasses 54+ for articulators.
74, for dowel pins or positioners therefor (nonwork supporting type).
144, for model trimmers.
- SEE OR SEARCH CLASS:
264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 16+ for processes by which dentures or teeth are formed which do not include specific dental steps (e.g., impression taking, articulation, try-in, etc.).
- 214 Impression taking or bite determination:**
This subclass is indented under subclass 167. Subject matter relating to the formation or use of either (a) an imprint or negative likeness of a part of the dental cavity, or (b) a visual record indicating the occlusal relationship of a patient's teeth.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
37+, for impression trays.
68+, for apparatus employed in determining a patient's bite.

SEE OR SEARCH CLASS:

520, Synthetic Resins or Natural Rubbers, particularly Class 523, subclass 109 for a composition containing a synthetic resin wherein said composition is useful in taking impressions of the mouth or to processes of preparing said composition.

215 METHOD OR MATERIAL FOR TESTING, TREATING, RESTORING, OR REMOVING NATURAL TEETH:

This subclass is indented under the class definition. Subject matter comprising either (a) a step of removing, repairing, testing, or prophylactically treating a natural tooth, or (b) a device which is employed in the restoration or treatment of a natural tooth and which remains in the patient's mouth.

SEE OR SEARCH CLASS:

106, Compositions: Coating or Plastic, subclass 35 for coatings or plastic compositions specialized for dental use.

424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for treating compositions, per se, and methods involving no more than the application of a Class 424 composition.

216 Cleaning:

This subclass is indented under subclass 215. Subject matter including a step or material for removing foreign matter from the surface of a tooth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

25+, for apparatus for cleaning teeth.

80+, for apparatus which dispense a cleaning or rinsing material.

119, for ultrasonic cleaners.

125, for power operated abrading or polishing tools.

142, for hand manipulatable abrading or polishing tools.

143, for scalers.

166, for abrading or polishing tool bits.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 167.1 for tooth brushes.

217.1 By lining or coating:

This subclass is indented under subclass 215. Subject matter relating to either (1) a device or material applied to a natural tooth to form an intermediate layer between the tooth and a filling, crown, etc., to be applied to the tooth, or (2) any treating or protective material that is applied to the teeth to form a film thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80, for apparatus for dispensing and applying coatings to the teeth.

228.1+, for a method which includes the step of applying a restorative composition or cement to fill a tooth or cover its face (bonding).

SEE OR SEARCH CLASS:

106, Compositions: Coating or Plastic, subclass 35 for a protective coating composition, per se, adapted to be applied to a tooth to form a structural barrier thereon.

424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for treating compositions applied to natural teeth.

218 Crown:

This subclass is indented under subclass 215. Subject matter relating to a simulation of the exposed portion of a natural tooth adapted to be attached to and carried by the remainder of the natural tooth.

(1) Note. Crowns having artificial teeth fixed thereto which are not carried on portions of natural teeth are considered to be prosthodontic devices and are excluded from this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

1, for veterinary crown slitters.

40, for a device for taking an impression of a prepared tooth prior to forming a

- prosthetic crown to be fixed upon the tooth.
- 145, for hand manipulatable crown slitters.
- 202.1, for artificial tooth construction or composition.
- 219 Attachment to natural tooth or adjacent crown:**
This subclass is indented under subclass 218. Subject matter comprising a step or means for securing a prosthetic crown to a natural tooth or to a prosthesis carried on an adjacent natural tooth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
183, for attachment of a crown to an abutment tooth wherein the crown serves as fastening means for an adjacent bridge.
- 220 By post:**
This subclass is indented under subclass 219. Subject matter wherein the crown is secured or positioned on the natural tooth by an elongated member extending vertically into both the crown and the natural tooth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
211, for method or means for securing a connecting pin to an artificial tooth facing, the connecting pin adapted to be used to fasten the tooth to a backing or plate.
- 221 Having surface grooves or ridges:**
This subclass is indented under subclass 220. Subject matter wherein the periphery of the elongated member is formed with one or more elongated crests or flutes.
- (1) Note. Threaded posts are included in this subclass.
- 222.1 Composite:**
This subclass is indented under subclass 218. Subject matter wherein the crown includes two distinct portions, each formed of a different material.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
198, for artificial teeth having a metallic occlusal surface.
- 208+, for artificial teeth having a metallic portion.
- 212.1, for a nonmetallic tooth composed of a plurality of distinct sections each formed of a different material.
- 223 Method of fabricating:**
This subclass is indented under subclass 218. Process including a step in the formation of the crown.
- (1) Note. Methods for fabricating dental crowns are classified in Class 433 only if they include specific dental steps (e.g., taking an impression of the prepared tooth, fitting the crown on the tooth, etc.). Process claims reciting only manufacturing or forming steps should be classified in the appropriate manufacturing or treatment class.
- 224 Endodontic:**
This subclass is indented under subclass 215. Subject matter relating to treating the pulp of a natural tooth.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
75, for an endodontic broach having a penetration gauge.
- 81, for endodontic dispensers.
- 102, for broaches.
- 225 Anchor pin:**
This subclass is indented under subclass 215. Subject matter relating to the use of an elongated member which is fixed to a tooth at an area where the tooth is to be filled to secure the filling to the tooth.
- 226 By filling, bonding or cementing:**
This subclass is indented under subclass 215. Subject matter relating to repair of a tooth by either (a) applying and shaping material on the crown portion of a tooth, or (b) employing a hardenable fluent material to bond a dental restoration to a natural tooth.

